

Space Unit

- Know about the earth's rotation (How long it takes and what does it cause?)
- Know about the earth's revolution (How long it takes and what does it cause?)
- Know which planets are terrestrial planets and which are gas giants
- Know the orbital period of earth
- What is a light year?
- What is a constellation, nebula, black hole, super nova?
- Asteroid belt and between which planets
- Name of the 2 missions that failed (exploded) and the years it happened
- Who were the first people on the moon. What is a satellite and how is this related to the moon
- Parts of the sun and which part is visible during a eclipse?
- Shapes of the galaxy
- Draw and explain a diagram for the reasons of our seasons
- Explain the difference between a comet and a meteor
- Explain why when a star burns out, why do we see the light for many years after?
- Explain the 3 steps to the big bang theory (How many years ago did this occur?)

The Sun diagram IS NOT on the Exam

Reproduction & Cell Unit

Parts of the cell Ribosome, Golgi Apparatus, Mitochondrion, nucleus, cell wall, cytoplasm, vacuole, Rough/Smooth Endoplasmic reticulum

How do animal and plant cells differ? (which have what parts)

Cell theory (3 statements)

Types of asexual reproductions (Budding, and more recognize definitions)

What animal or organism produces asexually?

Mitosis (Names diagrams in multiple choice)

Prophase, Metaphase, Anaphase, Telophase

Which cells in the body divide by mitosis? (know examples)

Why is it necessary for DNA to replicate during Mitosis?

What is DNA and who discovered it was a double helix, what does it consist of for nitrogen bases, where is it found

Meiosis (Which cells in the body divide by meiosis?)

Haploid diploid definition

When given a certain type of cell from the body indicate whether it has 23 chromosomes (sex cells) or 46 chromosomes (somatic). (Must know examples) Ex) Hair vs Sperm

- Sperm & Egg NOTES (How many of each, where are they formed and when, Comparison of size, ovary, testes, endometrium (what does it do and where is it found) (in multiple choice)

Facts about puberty and menopause (when a woman has no further reproductive eggs)

What is a carcinogen and how is it caused? (Cancer and Tumors (define benign & malignant))

Recessive and Dominant traits (capital is dominant and recessive is lowercase) Homozygous vs heterozygous pairs

What is non-disjunction within a sex cell that cause genetic disorders? (or zygote)

Define amniocentesis, zygote, acrosome, gigantism, dwarfism, hermaphrodite, ultra sound

Advantages/Disadvantages of Sexual & Asexual Reproduction

In Asexual reproduction, why do the chromosomes need to duplicate

What are mutations and what causes them?

What type of egg was used to make Dolly the sheep? Explain briefly the processes to make her? (Who did she look like?)

What would be benefits or disadvantages to cloning?

Sexual reproduction (Internal vs external--> know an organism that does both)

Some applying knowledge questions will be on the exam as well

Given a DNA test can you figure out who committed the crime